

Sewage overflows threaten Lake Erie

4 communities
face pressure to fix
old combined systems

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Plain Dealer Reporter

Spend 2½ hours at Niagara Falls, and you'll begin to understand the magnitude of the problem of raw sewage being dumped into Lake Erie and the streams that feed it.

That's because the amount of water you'll see roar over the falls, at a mind-boggling rate of 750,000 gallons a second, equals the amount of untreated waste Northeast Ohio discharges into local waterways in a typical year.

It's a problem that fouls our beaches, exposing us to disease, and endangering our most precious natural resource, Lake Erie.

Much attention has been given to the costly plans by the Northeast Ohio Regional Sewer District and Akron to dramatically reduce discharges of untreated waste, but four other communities are under pressure to develop similar long-term fixes. And the cost to ratepayers in Avon Lake, Elyria, Euclid and Lakewood is expected to reach hundreds of millions of dollars, officials say.

A portion of the sewer systems in each of these communities is combined, meaning that the sanitary and storm sewers are one. Heavy rain and melting snow often cause these combined sewers to overflow directly to local waterways through outfalls that dot the landscape and serve as pressure-release valves. The discharges are made up of a mixture of rainwater, sewage and industrial waste.

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This combined sewer outfall points directly at Lake Erie and the beach at Edgewater State Park. It is among 231 locally that can release untreated waste after heavy rains.

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SEWER

FROM A1

4 communities face pressure

After years of talking about the issue with sewage treatment system operators, government regulators have adopted a no-tolerance approach to the problem, aiming to force Northeast Ohio communities to dramatically reduce discharges of untreated waste from 7.2 billion gallons to about 500 million gallons a year. That would take the waste flow from 2 hours and 39 minutes on the Niagara Falls clock to just 11 minutes.

"This is a very costly endeavor, for these municipalities and, ultimately, ratepayers," acknowledged Mike Settles, a spokesman for the Ohio Environmental Protection Agency, which regulates the discharges under the provisions of the Clean Water Act. "But the reward will be healthier streams and a Lake Erie that we've never seen in our lifetime."

"This untreated sewage impacts aquatic life. It could potentially impact drinking water supplies, fish consumption and recreational activities," Settles added.

Nationally, about 800 billion gallons of untreated waste are released into waterways each year, a "serious public health threat that's often made worse because people do not know there's been a sewage spill," said Katherine Baer, a senior program director with the environmental group American Rivers.

Baer said the nation needs a real-time alert system to notify people of health-threatening discharges.

Long-term control needed to solve problem

"We found cases where someone, their kids, their dogs were swimming in the water and they found out later there was a sewage spill and they were not aware of it," Baer said. "It's very hard to monitor, but the EPA estimates there are 3 1/2 million cases of illness a year from recreational contact with sewage."

Locally, 7.2 billion gallons of untreated waste was released last year by five local sewer systems, according to figures from the Ohio EPA. All of the systems are required to enter into "long-term control plans" with state and federal officials to eliminate nearly all of the discharges in the next 25 years.

"We need to make sure that we are protecting our environment, which in turn protects our customers," said Todd Danielson, who is in his first year as chief utilities executive of Avon Lake Municipal Utilities. "We are part of the public health cycle."

The utility provides both sewer and water service to Avon Lake and several nearby communities. It draws drinking water from Lake Erie, which ups its stake in eliminating discharges. Its long-term plan calls for complete elimination of discharges.

So far, Avon Lake has made the most progress among local communities, eliminating annual discharges of 65 million gallons of untreated waste by separating 12 of its 17 combined sewer lines. The five remaining combined sewers will be separated by 2020, Danielson said.

And the total cost: \$28 million to \$32 million.

Customers saw a rate increase July 1, which amounted to about \$25 a year for the typical residential customer. And there will be two similar increases in 2012 and 2013, when the average homeowner will be paying about \$240 a year. Danielson said the utility would have to reassess its financial situation after that.

"Yes, there's certainly a cost associated with this," Danielson said. "But we need to make sure that Lake Erie is not polluted by human waste."

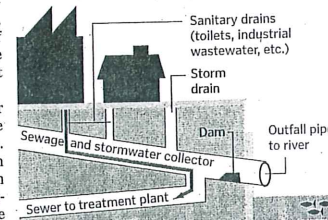
Akron had its long-term plan to reduce discharges rejected in March by a federal judge, who indicated it would allow too much waste to continue to be discharged and would take too long to implement. The city, which releases 2.4 billion gallons of untreated waste a year, the second-highest amount in the region, will now have to fight that decision in court.

Lakewood, likewise, had its long-term control plan rejected, but by the U.S. EPA. That plan

How a combined sewer system works

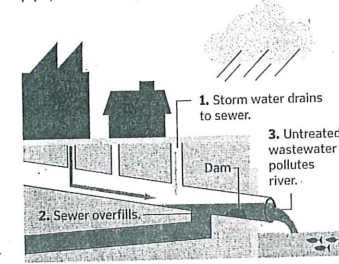
A combined sewer system collects both wastewater from domestic, commercial and industrial sources with runoff water from streets and buildings. The collected wastewater is then treated before it is released to streams, rivers or lakes. Problems arise when the system is overloaded after a big storm.

ON A DRY DAY: Wastewater and street runoff collected in the sewer is blocked by a partial dam in the collection pipe and flows by gravity to the treatment plant.



SOURCE: U.S. Environmental Protection Agency

AFTER A BIG STORM: Runoff from streets causes collector to overflow. When untreated wastewater rises above the dam in collector pipe, it is discharged into river.



KEN MARSHALL | THE PLAIN DEALER

Communities facing new pressure to eliminate discharges of untreated waste

The costly plans by the regional sewer district and Akron to eliminate discharges of untreated waste to local waterways have received a lot of attention. But Euclid, Lakewood, Avon Lake and Elyria must reduce the waste that pours from their combined sewer outfalls as well. Fixes for these communities are expected to cost ratepayers hundreds of millions of dollars.

Annual untreated wastewater releases into Lake Erie system

Avon Lake	100 million gallons
Lakewood	91 million gallons
Euclid	57 million gallons
Elyria	26 million gallons

For comparison, the Northeast Ohio Regional Sewer District (Cleveland and 61 suburbs) discharges 4.5 billion gallons annually, and Akron adds 2.4 billion gallons.

SOURCES: U.S. and Ohio Environmental Protection agencies; City of Euclid
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In Euclid, city officials are proposing to upgrade their sewer system to provide primary, but not complete, treatment to the 57 million gallons of wastewater released annually from their combined sewers. Under the plan, Euclid would capture 90 percent of the solids from the combined sewers and kill 99 percent of the bacteria in the waste flow.

Additionally, the plan, which still must be approved by the U.S. EPA and a federal judge,

calls for eliminating the 2 million gallons of raw sewage a year that are now discharged from the city's sanitary sewers.

"We're looking at about \$50 million in improvements over 15 years, some of which we've done already," said Euclid Mayor Bill Cervenik. He said sewer rates would rise about 30 percent in the next two years to pay for the plan.

"Obviously, it's a painful process because it's going to cost additional funds, which means we

have to raise sewer rates," Cervenik said. "But, at the same time, as a community, we cannot continue to allow under heavy storms raw sewage to enter Lake Erie."

Untreated waste carries bacteria, viruses

Across Northeast Ohio, there are 231 combined sewer outfalls that line Lake Erie and creeks in our neighborhoods and parks.

The untreated waste that flows from these outfalls contains bacteria, parasites and viruses that can cause diseases such as hepatitis, gastric disorders, dysentery, typhoid and cholera.

So far this summer, officials have issued 109 advisories warning people to stay out of the water at the 27 public beaches in Cuyahoga, Lorain and Lake counties after finding E. coli bacteria at levels up to 26 times higher than what federal officials consider safe.

Beaches with the most advisories included Century and Lakeview in Lorain County, and Edgewater, Villa Angela and Euclid Beach state parks in Cuyahoga County. At Edgewater, the issue is underscored by a combined sewer outfall that is located right on the beach.

Discharges from combined sewer systems are a significant source of bacteria and pathogens in local waterways, said Frank Greeland, director of watershed programs for the Northeast Ohio Regional Sewer District, which provides sewer service for Cleveland and 61 suburbs.

The district, which releases an average of 4.5 billion gallons of untreated waste a year, the largest amount in Northeast Ohio, will spend \$3 billion in the next 25 years, primarily on seven massive tunnels to store wastewater overflows until they can be treated, according to its long-term control plan recently approved by a federal judge.

Said Greeland, "Bottom line is we're talking about discharges of raw sewage, you flushing your toilet to the stream."

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